



## Applying a realistic evaluation model to occupational safety interventions

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# Applying a realistic evaluation model to occupational safety interventions

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*Background:* Recent literature characterizes occupational health and safety interventions as complex social activities, set in complex and dynamic social systems. Hence, the actual outcome of an intervention will vary, depending on the intervention, context, mechanisms, and the interplay between them, and can be categorized as positive or negative, expected or unexpected. Organizational context and personal characteristics of key actors are identified as crucial for the implementation and results of occupational health and safety interventions. However, little is known about 'how' to include these in evaluations of intervention effectiveness. A revised realistic evaluation model has been introduced as a method to overcome these challenges. The key question of the model is: *What works for whom, under what circumstances, in what respects and how?* Contextual factors such as underreporting of accidents/injuries, production pressure, unplanned organisational change, and mechanisms (personal characteristics), e.g. leader and worker motivation, are all included in the model and are proposed to be measured using quantitative and qualitative methods. This revised model has, however, not been applied in a real life context.

*Method:* The model is applied in a controlled, triadic, integrated (leader-based/worker-based) safety intervention study (2008-2010) in a medium sized wood manufacturing company. The interventions are based on DeJoy's theory of integrated accident prevention and involve: 1) the safety committee, 2) the seven supervisors and three safety representatives and, 3) 130 workers.

*Results:* The model's systematic inclusion of context and mechanisms provides a framework for more valid evidence of what works within accident prevention. Motivation among key actors is identified as crucial for the implementation of interventions.

*Conclusion:* The revised realistic evaluation model can help safety science forward in identifying the key factors for occupational safety interventions to succeed. However, future research should strengthen the link between output (immediate intervention results) and outcome (all effects the end-user experiences).